

CLAIMS

1. An exposure apparatus that exposes a substrate via a liquid, comprising:
a nozzle member having at least any one of a supply outlet that supplies the
5 liquid and a collection inlet that collects the liquid; and
a vibration isolating mechanism that supports the nozzle member and
vibrationally isolates the nozzle member from a prescribed support member.
2. An exposure apparatus as recited in Claim 1, comprising:
10 an optical system;
wherein, the optical system is supported by the support member.
3. An exposure apparatus as recited in Claim 2,
wherein the vibration isolating mechanism performs vibrational isolation so that
15 the vibrations of the nozzle member do not transmit to the optical system.
4. An exposure apparatus as recited in Claim 2 or 3,
wherein the nozzle member is annularly formed so that the nozzle member
surrounds the optical system; and the nozzle member and the optical system are
20 separately supported.
5. An exposure apparatus as recited in any one claim of Claims 1 to 4,
wherein the vibration isolating mechanism comprises an active vibration
isolating mechanism that dynamically vibrationally isolates the nozzle member from the
25 support member.

6. An exposure apparatus as recited in any one claim of Claims 1 to 5,
wherein the vibration isolating mechanism comprises a drive apparatus that
drives the nozzle member with respect to the support member.

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7. An exposure apparatus as recited in Claim 6,
wherein the drive apparatus can drive the nozzle member in relation to the
directions of six degrees of freedom.

10 8. An exposure apparatus as recited in Claim 6 or 7, comprising:
a position measuring instrument that measures a positional relationship between
the support member and the nozzle member;
wherein, the drive apparatus drives based on a measurement result of the
position measuring instrument.

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9. An exposure apparatus as recited in Claim 6 or 7, comprising:
a position measuring instrument that measures a positional relationship between
an optical system supported by the support member, and the nozzle member;
wherein, the drive apparatus drives based on a measurement result of the
20 position measuring instrument.

10. An exposure apparatus as recited in any one claim of Claims 6 to 9, comprising:
an accelerometer that measures acceleration information of the nozzle member;
wherein, the drive apparatus drives based on a measurement result of the
25 accelerometer.

11. An exposure apparatus as recited in any one claim of Claims 1 to 10,
wherein the vibration isolating mechanism comprises a passive vibration
isolating mechanism that passively vibrationally isolates the nozzle member from the
5 support member.
12. An exposure apparatus that exposes a substrate via a liquid, comprising:
a nozzle member comprising at least any one of a supply outlet that supplies the
liquid and a collection inlet that collects the liquid;
10 a support member that supports the nozzle member; and
an adjustment mechanism that adjusts a positional relationship between the
support member and the nozzle member.
13. An exposure apparatus as recited in Claim 12,
15 wherein the adjustment mechanism comprises a drive apparatus that drives the
nozzle member with respect to the support member.
14. An exposure apparatus as recited in Claim 13, comprising:
a position measuring instrument that measures the positional relationship
20 between the support member and the nozzle member;
wherein, the drive apparatus drives based on a measurement result of the
position measuring instrument.
15. An exposure apparatus as recited in any one claim of Claims 12 to 14,
25 comprising:

an optical system;

wherein, the optical system is supported by the support member.

16. An exposure apparatus that exposes a substrate via an optical system and a

5 liquid, comprising:

a nozzle member supported by a prescribed support member, and comprising at least any one of a supply outlet that supplies the liquid and a collection inlet that collects the liquid; and

an adjustment mechanism that adjusts a positional relationship between the
10 optical system and the nozzle member.

17. An exposure apparatus as recited in Claim 16,

wherein the optical system is supported by the support member; and the adjustment mechanism comprises a drive apparatus that drives the nozzle member with
15 respect to the support member.

18. An exposure apparatus as recited in Claim 17, comprising:

a position measuring instrument that measures the positional relationship between the optical system and the nozzle member;

20 wherein, the drive apparatus drives based on a measurement result of the position measuring instrument.

19. An exposure apparatus that exposes a substrate via a liquid, comprising:

a nozzle member supported by a prescribed support member, and comprising at
25 least any one of a supply outlet that supplies the liquid and a collection inlet that collects

the liquid;

a substrate stage that holds the substrate; and

an adjustment mechanism that comprises a drive apparatus that drives the nozzle member with respect to the support member, and that adjusts a positional relationship

5 between the substrate stage and the nozzle member.

20. An exposure apparatus as recited in Claim 19, comprising:

a position measuring instrument that measures the positional relationship between the substrate stage and the nozzle member;

10 wherein, the drive apparatus drives based on a measurement result of the position measuring instrument.

21. An exposure apparatus that exposes a substrate via a liquid, comprising:

a nozzle member that comprises at least any one of a supply outlet that supplies
15 the liquid and a collection inlet that collects the liquid;

wherein, at least one part of the nozzle member is movable in an optical axis direction of an exposure light that exposes the substrate.

22. An exposure apparatus as recited in Claim 21, comprising:

20 at least one position measuring instrument that detects information related to a position of the nozzle member;

wherein, the position of the nozzle member is controlled based on a measurement result of the position measuring instrument.

25 23. An exposure apparatus as recited in Claim 22,

wherein the position of the nozzle member is controlled based on information related to the liquid.

24. A device fabrication method that includes a lithographic process,

5 wherein an exposure apparatus as recited in any one claim of Claims 1 to 23 is used in the lithographic process.